ABSTRACT OF THE DISCLOSURE

A pollen sensor and method for detecting pollen which discriminates pollen particles floating in air from other particles on a real time basis. The pollen sensor includes an illumination position for generating a light beam, a first receiver for measuring the intensity (I) or (Ip) of a light beam scattered by floating particles in a detection zone, a second receiver for measuring the intensity (Is) of a polarized light beam in a direction perpendicular to light illuminated by the light beam and means for measuring the degree of polarization of the particles for distinguishing pollen particles from other particles.